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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/554,028 | 06/30/2006 | Chunquan Chen | 2793/112 | 7849 |
| 23122 | 7590 | 09/19/2008 | EXAMINER | |
| RATNERPRESTIA | | | PRYOR, ALTON NATHANIEL | |
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/554,028

Applicant(s)

CHEN ET AL.

Examiner

ALTON N. PRYOR

Art Unit

1616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 October 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 7-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 7-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SF/ICE)
Paper No(s)/Mail Date 10/20/05
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 7-13 are rejected under 35 U.S.C. 102(b) as being anticipated by Smith et al. (WO 00/04778; 2/3/00). Smith et al. teach a method for promoting the germination of seed and/or seedling emergence and/or the growth plants (e.g. legumes) comprising subjecting the plants to an effective amount of an agricultural composition comprising Lipo chitooligosaccharide (LCO). See abstract, page 4 lines 21-28, page 16 lines 1-8 and Examples 4-6. Smith et al. do not state that plants are harvested or that harvesting resulted in a yield increase. However, it is inherent that plants such as legumes would be harvested. It is also inherent that instant method of harvesting results in an increased yield since both Smith et al. and instant claims disclose the same active step of applying LCO to plants.

Claims 7-13 are rejected under 35 U.S.C. 102(b) as being anticipated by Smith et al. (WO 01/04778; 4/19/01). Smith et al. teach a method for increasing photosynthesis and/or yield plants (e.g. legumes) comprising exposing the plants to an effective amount of an agricultural composition comprising Lipo chito-oligosaccharide (LCO). See abstract, page 5 line 20 – page 7 line 24, page 18 line 3 – page 19 line 7, Examples 3,5,6 and table 3,6. Smith et al. do not state that plants are harvested or that harvesting

resulted in a yield increase. However, it is inherent that plants such as legumes would be harvested. It is also inherent that instant method of harvesting results in an increased yield since both Smith et al. and instant claims disclose the same active step of applying LCO to plants.

Claims 7-13 are rejected under 35 U.S.C. 102(b) as being anticipated by Lerouge et al. (USPN 5549718; 8/27/96). Lerouge et al. teach a method for accelerating the formation of nodules on plants (e.g. legumes) comprising exposing the plants to an effective amount of an agricultural composition comprising Lipo chito-oligosaccharide (LCO). See abstract, column 3 lines 30-37, column 6 lines 21-36, column 12 line 10 – column 13 line 5. Lerouge et al. do not state that plants are harvested or that harvesting resulted in a yield increase. However, it is inherent that plants such as legumes would be harvested. It is also inherent that instant method of harvesting results in an increased yield since both Lerouge et al. and instant claims disclose the same active step of applying LCO to plants.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 7-13 are rejected under 35 U.S.C. 102(e) as being anticipated by Bonnell et al. (The impact of LCO spray application on growth of soybeans under water stress, Feature session (F-21) ICID Young Professionals Forum. 18th International Congress on Irrigation and Drainage, Montreal Canada, International Commission on Irrigation and Drainage, 2002, pp. 11). Bonnell et al. teach a method for increasing flower induction of plants (e.g. legumes) comprising applying to the plants to an effective

amount of an agricultural composition comprising Lipo chito-oligosaccharide (LCO). See abstract. Bonnell et al. do not state that plants are harvested or that harvesting resulted in a yield increase. However, it is inherent that plants such as legumes would be harvested. It is also inherent that instant method of harvesting results in an increased yield since both Bonnell et al. and instant claims disclose the same active step of applying LCO to plants.

Claims 7-13 are rejected under 35 U.S.C. 102(e) as being anticipated by Prithivirajet al. (A host specific bacteria-to-plant signal molecule (Nod factor) enhances germination and early growth of diverse crops, *Planta*, 2003, vol. 216, pp. 437-445). Prithivirajet et al. teach a method enhancing germination and early growth of plants (e.g. legumes) comprising applying to the plants to an effective amount of an agricultural composition comprising Lipo chitooligosaccharide (LCO). See abstract and p. 440. Prithivirajet et al. do not state that plants are harvested or that harvesting resulted in a yield increase. However, it is inherent that plants such as legumes would be harvested. It is also inherent that instant method of harvesting results in an increased yield since both Prithivirajet et al. and instant claims disclose the same active step of applying LCO to plants.

Other Matters

International Search Report on IDS was not initialed, because there is no date entered on the IDS form the report.

The Oath is not signed by all inventors. The signatures of the following inventors are missing: Ewa Maria Cholewa and Birgit Carolyn Schultz. Please submit an Oath with the signatures of said inventors.

Telephonic Inquiry

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ALTON N. PRYOR whose telephone number is (571)272-0621. The examiner can normally be reached on 8:00 a.m. - 4:30 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Johann Richter can be reached on 571-272-0646. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Alton N. Pryor/
Primary Examiner, Art Unit 1616

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